

MARKUP OF ND LETTER TO STAKEHOLDERS
REWRITTEN VERSION (W/OUT REDLINE/STRIKEOUT) WAS
SENT TO STATE AS AN ATTACHMENT TO 6/25/01 LETTER
FROM DIK TO FRITZ -JH

June 21, 2001

FIELD(address)

Dear FIELD(salutation):

The North Dakota Department of Health (Department) has administered the federal requirements of Prevention of Significant Deterioration (PSD) of the Clean Air Act (CAA) in the state since 1977 when the Environmental Protection Agency (EPA) granted the Department PSD primacy. The EPA and some affected PSD sources have raised issues relating to PSD that may need resolution. The Department needs to reassess whether PSD Class I area increments for SO₂ are consumed. As part of that process, we need to determine which major and minor sources, as well as the emissions from those sources, are baseline or are increment consuming or both.

Brief Background

The PSD provisions of the CAA designated certain areas as Class I areas. The in-state Class I areas are the Theodore Roosevelt National Park and the wilderness portion of the Lostwood National Wildlife Refuge. The PSD provisions established air quality deterioration limits, called increments, in these areas. The increments are increases in air quality concentrations above those existing on dates when PSD provisions were triggered. Currently, the air quality in the Class I areas is better than the state and federal CAA ambient air quality standards.

For all PSD permitting actions, the law requires using air quality models to assess air quality in Class I areas due to source emissions. In 1978, the Department determined that the federally allowed PSD increments for sulfur dioxide could be exceeded due to the proposed Antelope Valley station units 1 and 2 short-term sulfur dioxide emissions. However, this source was permitted at short-term emission rates that would not cause ambient sulfur dioxide air quality degradation to exceed the PSD Class I area increments for sulfur dioxide.

Later, additional new sources of sulfur dioxide and source modifications were proposed. The additional emissions from these sources also contributed to sulfur dioxide concentrations that exceeded the increments. On four occasions from 1982 through 1992, the federal Department of Interior – as the federal land manager for the state's PSD Class I areas – determined that air quality-related values would not be adversely affected due to the additional sulfur dioxide emissions emitted by the proposed new sources and source modifications. Based on this determination, the Department permitted these additional sources.

In February 2000, EPA Region 8 notified the Department that the modeled ambient sulfur dioxide concentrations exceeding the PSD Class I increments were violations of the CAA. In January 2001, EPA notified the Department that it intended to issue a State Implementation Plan (SIP) call; the SIP call would have required revision of the SIP and implementation of corrective

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measures. After consultation with EPA, the Department responded by offering a schedule to reevaluate whether the increment is consumed. EPA concurred with the Department's proposal to complete the reassessment by February 2002. Copies of a Department letter dated March 13, 2001, and an EPA letter dated March 28, 2001, are attached.

In 1999, the Department sent a letter to major sources concerning determination of baseline emission rates for sulfur dioxide. In that letter, the Department provided calculations of the baseline sulfur dioxide emission rates for facilities in North Dakota based on U.S. Environmental Protection Agency guidance. After receiving some objections to the preliminary calculations, the Department did not complete its determinations on baseline emission rates. We would like to resolve that issue now so we can proceed with our increment assessment analysis. This letter gives you the opportunity to provide your position concerning this issue and any supporting documentation.

~~Specifically, we ask you to address whether allowable emissions or historical emissions should be used in determining the baseline emission rate.~~

~~Regarding the use of allowable emissions to establish the baseline emission rate, we ask that you address the following issues:~~

- ~~1. Should allowable emission rates be based on the allowable under Chapter 33-15-06 or 33-15-12 (i.e., 3.0 lb/10⁶ BTU or 1.2 lb/10⁶ BTU) of the North Dakota Air Pollution Control Rules or should compliance with the Ambient Air Quality Standards (based on modeling) be considered in determining the allowable for the facility? If the Ambient Air Quality Standards are considered, should the State Ambient Air Quality Standards that were in effect at the time of the minor source baseline date (December 19, 1977) be used in establishing this allowable emission rate or the current Ambient Air Quality Standards?~~
- ~~2. If the allowable is based solely on Chapter 33-15-06 or 33-15-12, should the allowable be based on the rated heat input of the unit as of the minor source baseline date or should it be based on the current rated heat input?~~

~~Specifically, we would also like you to address several issues regarding the use of historical emissions to establish the baseline emission rate.~~

- ~~1. The Department will be basing historical emission rates on AP-42 emission factors and is the data supplied in the Annual Emission Inventory Reports from 1974-1977. If you can document other, more reliable data please provide the best calculations and supporting documentation you have to determine emissions sufficiently reliable to determine historical emission rates? That is, peak 3-hr and 24-hr emission rates and annual emission rates.~~
- ~~2. What emission factors should be used in calculating historical emission rates (i.e., AP-42~~

factors, mass balance, etc.)? *<Note: This has been combined with number 1>*

2. Please provide your input on the most reliable method for calculating historical How should peak 3-hour and 24-hour emission rates be calculated from maximum (e.g., using 1-hour fuel feed rates, processing rates, etc. reported on the Annual Emission Inventory Reports?, using current year emission patterns applied to the base year averages).
- ~~4. Should any adjustments to historical emission rates be made based on changes in the quality of fuel used or raw materials (crude oil, field gas, etc.) processed after the minor source baseline date (i.e., increase in sulfur content)? *<Note: These changes don't relate to the determination of baseline concentration if they occurred after the minor source baseline date>*~~
3. Increment consumption will generally be based on changes in actual emissions reflected by normal source operation for a period of 2 years. EPA rules and guidance allow the potential to emit to be used if little or no operating data are available, as in the case of a permitted emission unit constructed before the major source baseline date but not yet in operation at the time of the minor source baseline date (see 40 CFR 51.166(b)(13), p. C.11 of the PSD workshop manual and 45 FR 52718, col. 3). The Department will be using actual emission rates based on the two-year period preceding the minor source baseline date (i.e., 1976 and 1977) unless adequate documentation is provided to show that emissions during that two-year period are anomalous. appears to allow an adjustment of historical emission rates if the unit had not achieved normal operations. How should normal operations for a unit be determined on a 3-hour, 24-hour or annual basis?
- ~~6. If affected companies can show higher emission rates than calculated from the annual emission inventory reports, what information should the Department accept for this demonstration?~~
4. If applicable, what SO₂ emissions from minor sources associated with your facility (i.e., oil and gas wells, etc.) are increment consuming, and what SO₂ emissions from those minor sources should be included in baseline?

Please provide the emission rates (lb/hr) which you believe are the baseline emission rates for your unit(s) on a 3-hour, 24-hour and annual basis and any supporting documentation. We ask that you submit your response to this letter within 45 days of receipt.

After receiving the requested information, the Department will develop a preliminary decision. That decision will be shared with you and be considered through a public process including a possible hearing later this fall. If you have any questions, please feel free to contact us.

Sincerely,

Francis J. Schwindt, Chief
Environmental Health Section

FJS:cc
Attach.